

A Brief History of the British Plant Hunters



Meconopsis simplicifolia

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Australian Rhododendron Society, Vic. Branch. March 2017.

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This essay is not a collection of biographies of the men named, they exist elsewhere. Its aim is to give the general reader an introduction as to how they became important plant hunters at such an eventful time in British history. A fuller account, but still concise and more interesting, is in Charles Lyte's 1983 book *The Plant Hunters* complete with references and lists.

It was the coincidence of the news that a biography of Robert Fortune is to be published this year and the arrival in the post of a 1987 facsimile edition of Robert Fortune's 1847 *Three Years' Wandering in China* that renewed my interest in the Plant Hunters. Robert Fortune was only one of a small army of plant hunters, mainly British, who literally risked life and limb to bring back plants and seeds to Britain.

The amount of rhododendron seed brought back to Britain from North America, as early as 1656, and from Europe, Central Asia and the Far East by travellers and government officials grew in volume so that by the early 1800s, a Scot, Dr. Francis Hamilton (a.k.a. Buchanan-Hamilton) and later Danish Dr Nathaniel Wallich, who followed Hamilton as director of the Calcutta Botanic Garden, were sending consignments of seed to the Royal Botanic Garden, Edinburgh. But it was Joseph Dalton Hooker's collection of new rhododendron species collected during his three years (1848-1851) in the Himalayas which opened the flood gates and helped create the impetus for the British plant hunters.

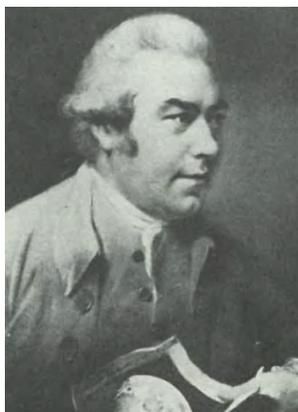
The more I read about the social and economic reasons for the great surge in plant hunters in the late 1800s and early 20th century the more intriguing it gets. One thing that comes through is how aggressive and ruthless English politics and business were to push Britain's interests and maintain its monopoly of its overseas trade.

They thrashed the Dutch when they objected to restrictions in maritime trade, knocked the French out of contention at Waterloo, and when China confiscated the tons of opium being shipped from Turkey and India, which the British had turned into a very lucrative business, British gunboats were ordered to shoot up the Chinese coastal ports.

A British resident of the Amazon called Henry Wickham, who had a checkered past, was commissioned by the British India Office to collect 70,000 seeds of the Brazilian rubber tree *Nevea brasiliensis* and ship them out secretly under the noses of the Brazilians, deliver them by a fast steamer to Sir Joseph Dalton Hooker at Kew Gardens where they were germinated in four days resulting in about 1900 plants. These were packed in 38 Wardian cases, transported to Ceylon and Singapore in August 1876 to form the nucleus of the great British rubber plantations in South East Asia, just when rubber tyres were needed for the motor trade and in time for World War I. Wickham, after some persistent haggling with Hooker, was eventually knighted for his efforts.

Robert Fortune reputedly smuggled thousands of *Camellia sinensis* seedlings in Wardian cases out of China to develop the British tea trade in Assam, Ceylon and India.

It was **Sir Joseph Banks** (1743 - 1820) British naturalist, botanist and patron of the natural sciences who set the scene for the emergence and pre-eminence over the next 150 years of the British plant hunters. Banks inherited a fortune when his father died when he was 17. Not a good student, his schooling at Harrow and Eton and later at Oxford was unremarkable although it was at Eton that his interest in botany became an absorbing study and interest for the rest of his life. In 1768 Banks contributed £10,000 of his own money to join Captain James Cook on a joint Royal Navy/Royal Society expedition on HMS *Endeavour* to observe the transit of Venus from Tahiti, and thereby calculate the distance of the Earth from the Sun, and secretly to discover the "unknown Southern Continent". They travelled to Brazil, rounded Cape Horn and crossed the Pacific Ocean to Tahiti where they stayed for three months for their scientific solar observations and fraternizing with the natives before continuing on



Sir Joseph Banks

to New Zealand and the Australian east coast. Despite the loss of over half of Cook's crew and seven of Banks's original team of ten to disease in their 2½ months stay in Java, the return of the survivors to England with plants and strange animals created a sensation. Banks received the praise and adulation whilst Cook was largely ignored. Although it was scientific discovery that excited Banks he was interested in plants that had commercial potential and could be introduced into other parts of the British Empire which at that time spanned the globe.

In 1772 Banks was invited informally by King George III, whose mother established Kew Gardens in 1759, to become Master of his Garden, a position he held until his death in 1820. He sent botanists abroad to find new plants and extend the Gardens' collection. He employed **Daniel Solander** and **Jonas Dryander** (both commemorated in street names in suburban Melbourne), both Swedish students of Linnaeus, to catalogue the multitude of new plants sent to Kew which became the principal European centre for the new botanical discoveries.

King George III was a keen gardener and it became fashionable among the aristocracy and the growing number of wealthy merchants to seek plants to enhance their estates. Already landscape designers such as Lancelot "Capability" Brown (1716-1783) had created natural landscape style gardens rather than gardens as we know them today. It was not until the next century when fashions changed with exotic plants arriving from China that quickly created an increasingly popular market. Nursery firms such as **Veitch** recognized the potential and much later Bees, founded by **A.K. Bulley** (1861-1942) a wealthy Cheshire cotton merchant, as well as private patrons and backed by botanical gardens such as Kew sponsored the plant hunters. The right social and economic conditions came together at the same time in Britain to encourage the work of the British plant collectors and to provide an eager and receptive market for their discoveries.

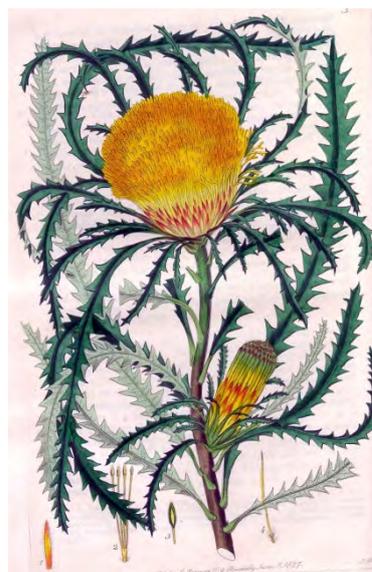
This was also the time when New South Wales was colonized and Australian plants propagated from seed became the latest fashion amongst gardeners. Australian species were regularly featured in the illustrated gardening journals of the day including the beautifully illustrated Curtis's Botanical Magazine. The introduction of hardier, more colourful and easily grown exotics such as rhododendrons, tropical water lilies and orchids, and the transport of living plants in Wardian cases, saw the rapid decline in the demanding and more difficult Australian species. By 1840 Australian plants were largely the province of botanical gardens.



Hakea laurina



Grevillia macrostylus



Dryandra longifolia

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Australian species grown in England 1827 – 1870s. Curtis's Botanical Magazine

Live plants and cuttings had about 1 in 1000 chance of surviving the journey to Britain and therefore were transported more commonly as seeds or corms. A chance observation by Dr. **Nathaniel Bagshaw Ward** (1791 – 1868), a medical practitioner in London's East End interested in ferns and moths, changed all that. He was surprised to see a fern and grass



Dr. Nathaniel Bagshaw Ward

growing from the damp leaf mould at the base of a sealed bottle containing a chrysalis of a sphinx moth. He realised that London's foul and smoky atmosphere was toxic to the ferns he was attempting to grow with little success in his modest garden. He noted that moisture condensed on the inner glass surface during the night and disappeared in daylight to reappear the next night



A Wardian case

thus maintaining humidity within the glass vessel. He reported his observations to William Jackson Hooker, Director of Kew Gardens, and had a carpenter build two glazed, closely fitted wooden cases to his specifications which, as a trial, were filled with English grasses and mosses which were shipped as deck cargo to Sydney in 1833 by George Loddiges, owner of a very large successful nursery which boasted the largest hothouse in the world.

Growing plants under glass was not new but sealing the environment was the secret of Dr. Ward's success. The mosses and grasses survived the journey to Sydney where the cases were cleaned and planted with indigenous Australian plants, that had been difficult to transport in the past, for a successful return journey to London. Dr Ward lectured and wrote a monograph about his observations, *On the Growth of Plants in Closely Glazed Cases* (1842), and was made a Fellow of the Royal Society. He changed plant collecting forever but he died otherwise unrewarded and forgotten.

The Society of Jesus, the **Jesuits**, had a long history of involvement in China beginning in the 16th century not only as Christian missionaries but also as proponents of European science, mathematics and astronomy. Many of them held significant positions as counsellors and advisers to Chinese officials in what became a two way exchange with China. From the 1860s to the turn of the century French missionaries, in particular Pères **Amand David**, **Jean Marie Delavay** and **Paul Farges**, travelled deeper into China westward to the Tibetan Border and led the way for the British plant hunters who followed. They found and described many first class garden plants, including rhododendrons, and sent dried herbarium specimens but few seeds to the École de Botanique and the Museum of Natural History in Paris, their names remembered in *Rhododendron davidii*, *Rhododendron fargesii* and *Magnolia delavayii*. They also found and described the dove or handkerchief tree *Davidia involucreata* as did Dr. Henry during his sojourn in Yichang and who later directed "Chinese" Wilson to its location.

Robert Fortune (1812-1880) was born to a humble family in Edrom, Berwickshire in Scotland. He attended the local parish school reaching an elementary level to become an apprentice to a local nurseryman eventually gaining a post at the Royal Botanic Gardens in Edinburgh. He moved to London and was soon promoted to superintendent of the Hothouse Department of the Horticultural Society's Garden in Chiswick.



Robert Fortune

Soon after the First Opium War in 1839, in which the British used gunboat diplomacy to force open access to inland China, the Horticultural Society, (later the Royal Horticultural Society) invited him to lead an expedition into the Chinese countryside even though it was still in turmoil.

He was appointed as the Society's Collector in China fitting him out for the expedition with firearms and ammunition, which he was to return unless sold, the proceeds going to reimburse the Society. He was given specific instructions topped off with a long list of plants to discover and collect, including the Emperor's peaches rumoured to weigh two pounds (1kg) each.

He arrived in Hong Kong in July 1843 moving up the coast to Amoy where he had been warned of the hostility of the local population, something he largely ignored only to be pick pocketed and assaulted by an angry crowd which trampled the plants he and his attendant had collected. The pair escaped by Fortune charging into and knocking over a number of his attackers. Further inland he was not subjected to the same sort of abuse and was slowly accepted. Over the next three years he collected in the northern provinces and survived the many dangers of those journeys. He spoke passable Mandarin, shaved his head and wore a pigtail wig and the local dress and was able to pass himself off un-noticed, even to his associates, as one of the locals.

It was on his last voyage back to Shanghai as a passenger on a junk that the vessel was attacked by five pirate ships. The crew panicked but Fortune kept his cool and threatened the helmsman with his gun to stay on course. The closest junk fired a broadside which fell short and, as they re-loaded, Fortune waited until they were in range and raked them with his firearms wounding and killing some which frightened them off. He then repeated the manoeuvre when a second junk closed with his vessel, first shooting the pirate helmsman which left the vessel out of control. The other three pirate junks decided to call it off. A day later another five pirate junks emerged from behind the headlands of the coastline and again Fortune, taking his chances, succeeded in fighting off the pirates with the same tactics once more. Throughout these encounters Fortune had been running a high fever and collapsed into his bunk once the danger had passed. The captain and crew, now safe, opted to sail to Ningpo closer than the port of Chu-shan Fortune persuaded the captain with his loaded pistol to stick to the agreed destination of Chu-shan from where Fortune had arranged a passage to Shanghai and thence to London.

His second journey to China (1853-56) sponsored by the East India Company was more a case of industrial espionage rather than a botanical exercise. At that time tea was the fashionable drink much as coffee is today but tea imported from China was becoming prohibitively expensive. Fortune from his first trip already had detailed notes on the culture of the *Camellia sinensis* plants and of the harvest, drying and preparation of the leaves by the many small family plantations in the tea growing areas in northern China. The aim of his second trip was to by-pass the lucrative world wide Chinese trade in tea by collecting 20,000 young tea plants and dispatching them to Darjeeling in India to form the basis for tea plantations in Assam. He was also able to enlist willing Chinese experts in the technology to come to India to supervise and assist in the tea production process. On returning from each of his forays into the Chinese interior he divided plants he had collected into three or four groups each being sent on different ships to ensure that some, if not all, of his plants arrived safely in London.

For his final journey home he packed all his very best plants and sent them on ahead and prepared a duplicate set to accompany him on his own homeward voyage. He made a third trip to China (1858-59) and one to Japan (1860-62). He wrote three more books which were very popular including a companion volume to *Three Years' Wandering in China: A Journey to the Tea Countries of China and India*, and the sales of them provided him with a comfortable retirement. He died in 1880.

Joseph Dalton Hooker (1817-1911) had a long and illustrious career and was the younger son of Sir William Jackson Hooker, professor of Botany at the University of Glasgow, and later Director of Kew Gardens. He attended his father's lectures from the age of seven and went on to graduate in medicine from Glasgow University when he was twenty-two. When still a medical student Hooker became fascinated by Charles Darwin's account of his journey aboard Captain Robert FitzRoy's H.M.S. *Beagle* and leapt at a chance to follow in Darwin's footsteps by joining famed Arctic explorer Sir James Clark Ross on an expedition to discover the South Magnetic Pole. Hooker concentrated on completing his M.D. degree confident that Ross would then select him. He was very put out to learn Ross appointed Royal Navy surgeon Robert McCormick, 17 years his senior but with an undistinguished career, as zoologist. He confronted Ross arguing that Darwin was equally untested setting out on the *Beagle*, a voyage that cemented Darwin's reputation as Hooker hoped this experience would do the same for him.



Sir Joseph Dalton Hooker

Ross reassured the indignant young Hooker as assistant surgeon and botanist on H.M.S. *Erebus* he would be given every opportunity to collect the specimens he found. Hooker reluctantly agreed to this arrangement.

His instructions were to collect and catalogue plants of representative flora at their different stops along the way, ranging from lichens and mosses from the South Atlantic islands to tree ferns at St. Helena and Tasmania, and to detail their possible commercial use. He also found time to sketch the marine species brought up in the ship's nets and the many landscapes of their ports of call. On his return to London four years later he joined the 1846 Geological Survey of Great Britain searching for fossil plants in the coal-beds of Wales.

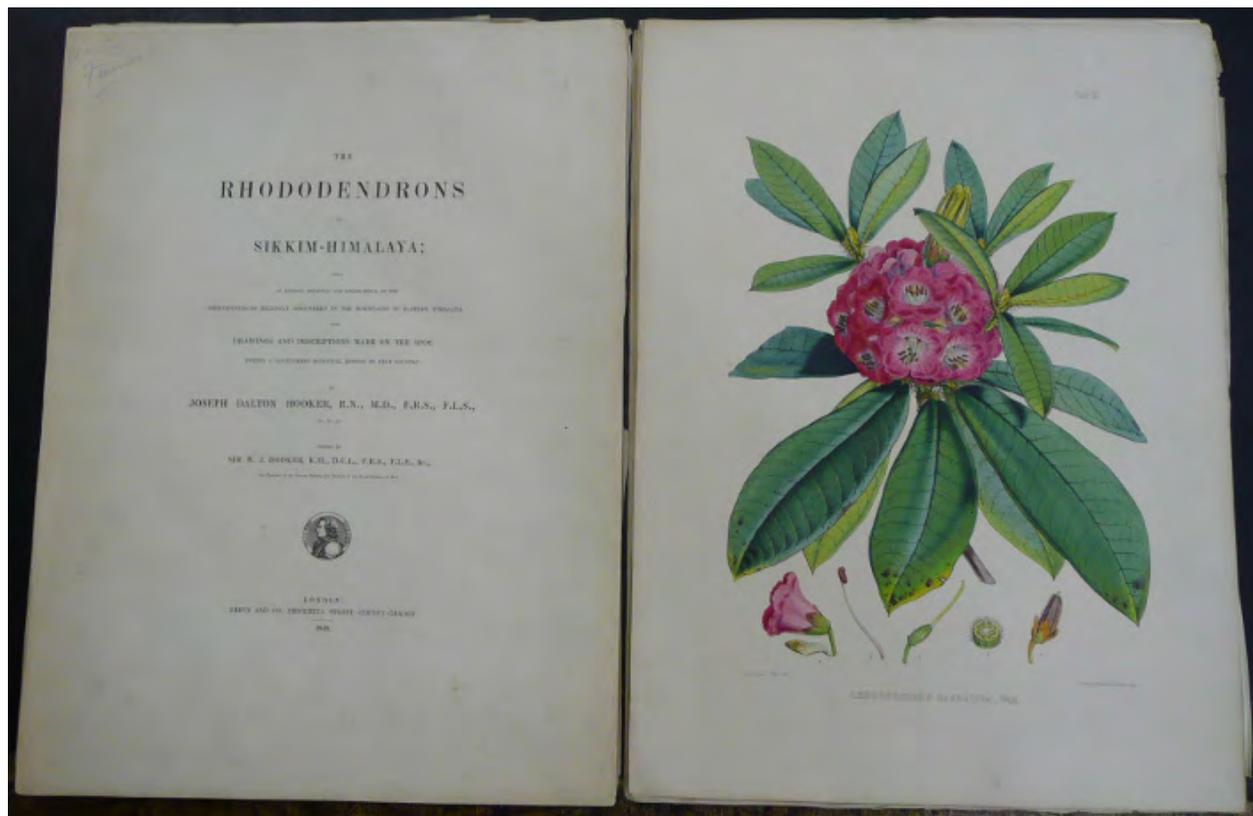
But he wanted to get to India and the Himalayas and, with his father's influence and connections, and after the younger Hooker put his case to travel first to India before the First Lord of the Admiralty, Lord Auckland a former Governor General of India, he was placed on half pay as assistant Navy Surgeon and granted £400 by the Treasury for two years' plant hunting in 1849-50 in Sikkim in the eastern Himalayas. First he explored in East Nepal. He then embarked on a larger and longer expedition through Sikkim to the Tibetan border engaging a retinue of 55 servants, porters, an escort of five Nepalese sepoys in scarlet jackets, an interpreter and a personal servant. Permits to enter Sikkim were continually delayed until the Government of India gave the Rajah an ultimatum that his annual remittance from India would cease.



Hooker was critical of this fanciful scene, with a limpid stream in the bottom left hand corner, and of him receiving gifts of May flowering rhododendrons and fruits of the *Hodgsonia* vine which do not appear until September. Included in this picture is his dog Kinchin, a cross between a Tibetan mastiff and a Sikkim hunting dog, bought as a puppy and a constant companion for many months until it slipped off a flimsy bamboo suspension bridge to be swept away by the torrent beneath.

It quickly became obvious that Hooker and his companion, Dr Archibald Campbell, the political agent in Darjeeling, were not welcome. Instead the Rajah, 'a weak and foolish man' influenced by his devious chief adviser, the Dewan, was determined to expel Hooker and Campbell from Sikkim and conjured up all sorts of obstacles to their passage through the country. Hooker imperiously brushed these aside and throughout all the delays and frustration he continued to collect plants and seeds and record his scientific studies of the flora, the geology, and to determine the heights of the major mountains and the mountain passes. Later on the situation came to a head. One freezing night the pair were set upon by a group of men who separated them, taking Campbell outside to beat and torture him while holding Hooker prisoner pinned against a wall. They were held under guard and separated for several days until the British called the locals' bluff by moving troops and heavy artillery up to the border. The two men were released reaching Darjeeling safely after daily expecting to be poisoned or murdered. Shortly after their release troops moved in, stripped the Rajah and the Dewan of their power and wealth and annexed part of Sikkim for the British Crown. During this ordeal Hooker still managed to collect ripe seed capsules of the many different rhododendron species along their path to the border.

His return to London was greeted with amazement at what he had achieved. He was a gifted artist and had collected, sketched and described 43 new species published in 1849-51 in his *Rhododendrons of the Sikkim Himalaya* illustrated by premier botanical artist Walter Hood Fitch (1817-1851) guided by Hooker's field notes and sketches.



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Rhododendrons of the Sikkim-Himalaya, 1849-51



Kangchenjunga – sepia drawing



Rhododendron barbatum – Watercolour and pencil

Hooker's art.

He succeeded his father as Director of Kew in 1865. During his 20 year tenure as Director he had a long-running and bitter duel with Sir Richard Owen, superintendent of the natural history departments of the British Museum, who saw the expansion and rising status of Kew as a threat to himself and his own department. With the support behind the scenes of an acrimonious member of parliament, Acton Smee Ayrton, they tried to force Hooker to resign, particularly when Hooker came out in support of his friend and confidant Charles Darwin. The matter was debated in parliament and reached the House of Lords and was reported in the press. It was not resolved until Prime Minister Gladstone promoted Ayrton from the Board of Works to Judge Advocate-General just before Gladstone's government fell. Ayrton failed to be re-elected.

Two years of dispute took its toll on Hooker who wrote 'What can be more humiliating than two years of wrangling with such a creature!' During this crisis Hooker was elected as President of the Royal Society which demonstrated the support he had from his peers and displayed publicly the high regard the scientific community had of him. This and other episodes suggest that Hooker was a high-minded and opinionated individual, but there is no question about his tremendous contribution to science for which he was knighted in 1877. He was forced to retire at age 62 for medical reasons and for the next 26 years he spent his time writing at a prolific rate, and continued to classify plants including the *Impatiens* genus. He completed this task in his 94th year, packed away his microscope, his specimens and his papers and died four days later in his sleep on 10th December 1911. He was eventually buried next to his father, as he wished, in the churchyard of St Anne's Church, Kew.

Augustine Henry (1857-1930) was born in Dundee, Scotland. Soon after his birth his parents returned to their native Ireland where his father Bernard and mother Mary ran a grocer's shop in Cookstown, County Tyrone. More often called Austin, he attended the local school and was a brilliant scholar winning a place to Queen's College, Galway and then to Queen's College in Belfast and then on to London to study medicine. He was persuaded to join the Imperial Maritime Customs Service in China, first completing a crash course in medicine in Edinburgh to finally qualify and learning enough Mandarin to pass the Chinese Customs Service examinations. He left for China in 1881 and spent a short time in Shanghai before being assigned as assistant medical officer and customs officer at Yichang on the Yangtse River 1600 km from the coast. He was stationed there for the next eight years and broadened his initial botanical interest in medicinal plants cultivated around Yichang to the surrounding 'fair number of interesting plants; and as this part of China is not very well known to botanists interesting specimens might be obtained'.



Dr. Augustine Henry

In a letter to the Director of Kew Gardens he admitted his limited knowledge of botany but offered to collect 'useful' plants.

He was encouraged by Sir Joseph Hooker and also by Arthur K. Bulley. His collecting was confined to weekends as his professional duties occupied most of his time. He did engage native helpers in Yichang and in other parts of China and Taiwan where he was stationed and collected seeds and dried plants totalling close to 160,000 specimens, and over 5000 species many of which bear his name including *Rhododendron augustinii*, *Carolinella henryi* (after his first wife Caroline Orridge who died of tuberculosis in 1894 in a sanitarium in Colorado, USA) which was re-classified as *Primula henryi* in 1905, and *Lilium henryi*, the Henry lily, still cultivated today.

He visited Kew when on home leave in 1890 and was greeted as a celebrity, one who in 1886 had sent 'one of the most important plant collections ever received from the centre of China'.

He was generous with his time and advice to other plant hunters and freely admitted he had no training as a botanist and could have done more if he had had the genius and education. He called it his private hobby. He admitted his extensive knowledge of ancient Greece gained in his early university days was of no value at all.

At his last new posting in the customs service at Simao he met Ernest Wilson. Wilson carried instructions from Veitch to visit Henry to get 'precise data as to the habitat' and collect seed of the beautiful dove or handkerchief tree (*Davidia involucrata* after Père Amand David) which Henry had first seen in 1888. Henry replied, 'You may ask why not employ a native. Ah! You don't know the Yunnanese – my muleteer who collects plants is the only man who could or would do the work – and even he does only about [one tenth] of what I could do if I had his time. The other Chinese and aborigines are too lazy for seed collecting ... Money is not what is wanted, but time, oceans of time. Nothing astonishes people at home so much as the fact, a real fact, that in countries like China you cannot do everything with money. Patience is more valuable.' Henry gave Wilson directions as to where the tree could be found and seeds were germinated in Veitch's nursery with their progeny still popular today.

By the end of 1900 Henry felt that he needed a change of climate for his physical and mental well-being and retired. 'It is very difficult to bear up with the isolation, friendlessness and monotony of a place such as this.'

He had admired the majestic forests that covered the mountainous slopes around Yichang and their 'beautiful loneliness' and decided on a new career in forestry attending a course at the French School of Forestry in Nancy. He was then asked by Henry J. Elwes to help write seven volumes of a monograph on trees cultivated in Ireland and Great Britain.

In 1907 Henry was invited to become reader in forestry at the University of Cambridge which led to him becoming the first professor of forestry at the Royal College of Science in Dublin where he stayed until 1926. In 1908 he married Alice Brunton. His portrait, painted by Celia Harrison, captures his gentle and scholarly countenance. It hangs in the National Botanic Gardens in Dublin. He died in Dublin in 1930.

Ernest Henry "Chinese" Wilson's (1876-1930) parents were florists in Shirley,



Ernest Henry "Chinese" Wilson, wife Helen
and daughter Muriel Primrose

Warwickshire and of course since childhood he was involved in flowering plants which became his life's work eventually as one of Britain's significant plant hunters. He was apprenticed to a local nursery at age 16, went on to Birmingham Botanic Gardens, was awarded the Queen's Prize for botany at Birmingham Technical School and began working at the Royal Botanic Gardens, Kew in 1897 where he won the Hooker Prize for an essay on conifers.

The herbarium specimens and seeds that Pères Amand David and Jean Delavay, whose interests were almost solely botanical rather than commercial, and later Henry, had sent from China, stimulated great interest in the horticultural world and whetted a healthy and growing appetite for more plants from China. It was Sir Harry Veitch who recognized the commercial value in importing more plants for the European market, in particular the dove tree *Davidia involucrata*. It was less than two years after Wilson's employment at Kew that Veitch asked Sir W.T. Thiselton-Dyer, director of Kew at that time and Hooker's son-in-law, to recommend a botanical collector to be sent to China.

Thiselton-Dyer recommended Wilson, who then trained at Veitch's Coombe Wood Nursery for six months before leaving for China in 1899 via the Arnold Arboretum in Boston, Massachusetts where he stayed for five days learning how to ship plant material safely. He was introduced to Charles Sprague Sargent, the Director of the Arboretum, who was also keen to get Asiatic plants. Sargent suggested he travel to Simao to talk with Augustine Henry who could show him the most likely area to find the dove tree. In the meantime Henry's tree had been cut down for housing but Wilson re-discovered those first described years before by David 600 km away in Yichang.

Wilson collected for two years exploring the steep sided valleys in that area and returned in 1902 with seeds of the dove tree and 16 rhododendron species for which Sir Harry Veitch presented him with a gold pin shaped like a *Meconopsis* flower encrusted with 41 diamonds.



Wilson's travel modes: - overland in a sedan chair as befits his status (above) and below, by water in the Harvard.

His second trip for Veitch started from west Szechuan reaching the Tibetan border and north to Kansu. He returned with seed of 36 species of rhododendron, which included several discovered by David, the seed of 305 other species, and 35 Wardian cases of bulbs, corms, rhizomes and tubers for Veitch's nursery.

From 1905 to 1911 he collected for the Arnold Arboretum taking his Sanderson full plate field camera and photographic glass plates with him. It was on this journey that he found and collected the good blue form of *Rhododendron augustinii*. It was on his third journey that his leg was broken by a rock fall as he was being carried along the track by porters in

his sedan chair. He used his camera tripod as a splint while his party made a forced march taking three days to reach a Friends' Mission Dr Davidson for treatment. He later named a new rhododendron, *R. davidsonianum*, as a thank you to Dr Davidson for his care. Also amongst the collections of this trip were bulbs of the regal lily which were successfully propagated in the USA. His leg was re-broken back in Britain in 1911 which left him with a shortened right leg giving him what he called his 'lily limp' which prevented him from undertaking any more intrepid journeys. For the next 2½ years he continued working with Sargent at the Arnold Arboretum on his specimens and wrote his best known book *A Naturalist in Western China* (1913). Sargent suggested he explore Japan and he set out in 1914 taking his wife Helen and daughter Muriel Primrose with him. In 1917, again with his wife and daughter, he journeyed through Korea and Taiwan and returned to Japan where he visited Kurume on Kyushu Island where he saw masses of *R. kiusianum* and *R. kaempferi* hybrids. These were included in crates of plants and seed he brought back to Boston. In Britain the varieties he introduced were known as Wilson's Fifty.

In 1919 he was appointed Associate Director of the Arboretum. Three years later he set off on an extended tour of gardens in Australia, New Zealand, India, Central and South America and East Africa. Following Sargent's death in 1927 he was appointed Keeper of the Arnold Arboretum. During his time with Arnold he brought back several thousand plant specimens and 2,488 glass negatives of scenes in eastern Asia. He wrote two more books during the time of the Great War and several others followed. His plans to retire to his beloved Gloucestershire were shattered when he and his wife were both killed in a car accident in Worcester, Massachusetts after visiting their recently married daughter.

He received many awards both horticultural and academic in recognition of his contribution to horticulture and in May 2010 the Birmingham Civic Society installed a blue plaque at the Birmingham Botanical Gardens commemorating his time there and describing him as Gardener, Botanist and Plant Hunter. One should also add Photographer and Author.

George Forrest (1873-1932) lived in China almost continuously from 1904 to 1931 and the volume of material he sent back was so great that those on the receiving end back in Scotland could not cope and some was eventually thrown away. He was born in Falkirk, Scotland. In his teens he was employed by a pharmaceutical chemist where he learnt the medicinal properties of many plants and their uses and how to dry, label and mount herbarium specimens. He left this job when he inherited some money and travelled to Australia where he stayed for five years. He went gold prospecting with modest success and worked on a sheep station but returned to Scotland when employment became harder to find. He was given a position in the herbarium of the Royal Botanic Garden in Edinburgh under the Regius Keeper, Sir Isaac Bayley Balfour, who, like many others, was interested in the new plants pouring in from China. A.K. Bulley of Bees Nursery asked Balfour to recommend a plant hunter to travel to China.



George Forrest

Balfour nominated Forrest who was instructed by Bulley to explore south-east Tibet and north-west Yunnan in western China further west than Wilson had been. On his first trip in 1904 he found and collected *Gentian sino-ornata* and again in 1910. Six subsequent expeditions over the next twenty-five years were organised by the Royal Botanic Gardens Edinburgh and financed by syndicates.

Forrest first entered the area from Burma and trained 17 native collectors from a village in north-west Yunnan who collected over the botanically rich country through which four of the great rivers of eastern Asia flow north to south in an area less than a 165 kilometres wide, the eastern branch of the Irrawaddy, the Salween, the Mekong and the Yangtse. His team accumulated plants and seed from many new species totaling over 31,000 specimens and so much seed that some was eventually discarded.

His team stayed briefly at a French mission unaware of the 1905 Tibetan conflict between the rebellious Tibetans, the British who had occupied Lhasa, and the Chinese. The Tibetans were out for revenge and murdered any foreigners they came across. On their return to the mission Forrest's team was joined by sixty or so Christian converts who were suddenly attacked and picked off one by one with poison arrows and double handled swords. Seventeen escaped but Forrest does not mention them again. Forrest ran for his life and jumped off the narrow track tumbling 60 metres down through the dense jungle and crawled under a large rock bruised and bloodied until nightfall. He then climbed up 900 metres of rock and jungle, waded waist deep up a stream to put his pursuers off only to be surprised by another party of Tibetans who put two poisoned arrows through his hat as he escaped again. He travelled by night and hid during the day nearly starving until he was picked up by some local indigenous people who cared for him and fed him before guiding him to safety, disguised as a Tibetan, over high mountain passes and down through dense jungle back to his base.

This narrow escape did not deter him from returning to Yunnan where he amassed hundreds of species of rhododendrons and other shrubs and perennials. None of his subsequent six excursions into Yunnan were quite as perilous. On his last expedition he collected about 2 kg of primula seed, meconopsis seed, liliun seeds and bulbs and loaded two mules with a total of 135 kg or so of 'good clean seed representing some 400-500 species'. He said that he had succeeded in collecting everything he had wished for, but he had failed to find the spot which at one time he believed might have been the centre of the world for rhododendrons. Despite repeated pleas from friends and colleagues, Forrest did not write a full account of his 28 years of plant hunting in western China. He said this was a job for his retirement. Having completed his last trip and before leaving for home he went for a last hunt through the wonderful scenery in Tengchung with his gun and his dog, a favorite pastime, when he suddenly collapsed and died from a massive heart attack. He was buried beside his friend and fellow plant hunter George Litton from the British Consulate in a cemetery for foreigners in Tengchung now reclaimed by the jungle. His epitaph in the *Scottish Rock Garden Club Journal* was: 'The world deplores the loss of such a man, but Scotland mourns a son.'

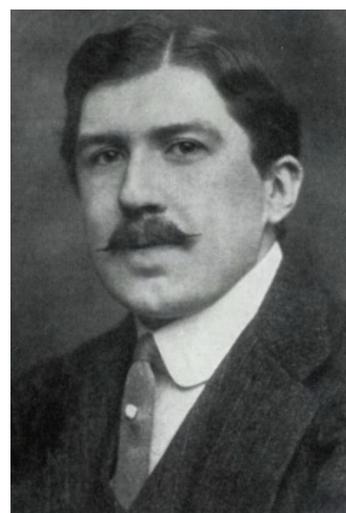


Forrest's last journey – His collectors ready to start.



Forrest's last journey – His packing cases ready for dispatch.

Reginald John Farrer's (1880-1920) wealthy parents lived in Clapham, North Yorkshire and had him educated at home because of a disfiguring cleft lip and palate and the many subsequent operations had left him with a speech defect. Even at age 10 he was a well qualified field botanist and at age 14 built his first rock garden in an abandoned quarry near his home in Clapham. He attended Oxford University where he helped to build another rock garden. After graduating he spent eight months in Japan and there formed firm ideas on rock garden design where alpine plants grew in "natural" surroundings. Back in England he tried his hand as a novelist, poet and playwright in which he never really succeeded and confined his talents to gardening with an emphasis on alpine plants. He travelled widely in Europe exploring the mountains of Italy, France and Switzerland. He was considered to be something of an eccentric even at one time loading his shotgun with seeds collected on his travels and blasting them into a rock face near his home in Yorkshire presumably as an experiment.



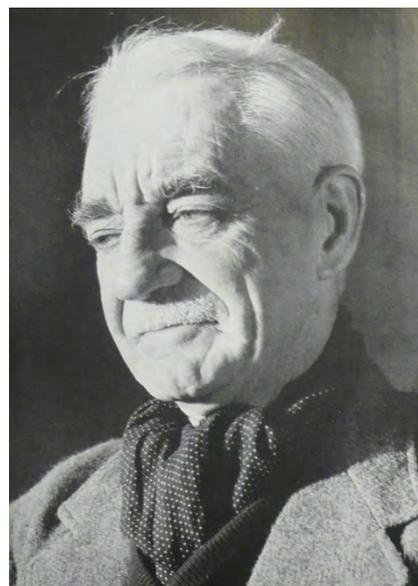
Reginald John Farrer

His most popular and influential book was *My Rock Garden* in 1907 which remained continuously in print for more than 40 years. He wrote several more books about alpine plants, his ideas on gardens and his plant hunting in the Italian Dolomites. In 1918 he published *The English Rock Garden: Volumes 1 and 2* which ran to at least four impressions being another very popular and influential book. In 1914 Farrer joined William Purdom from Kew on a two year expedition to Tibet and Kansu province in North West China.

They brought back hardy plants and seeds that have survived in English gardens, but sometimes neglected to prepare herbarium specimens necessary for classification and naming. Farrer was more interested in sending back to the Royal Botanic Garden in Edinburgh attractive new plants with horticultural potential rather than listing in detail all the plants in that region, which was the special interest of Sir Isaac Bayley Balfour.

In 1919-20 Farrer made two sorties into the mountains of Upper Burma. In the first season he was joined by Euan.H.M.Cox (father of Peter Cox) author of *Farrer's Last Journey, Upper Burma 1919-20*. The climate in that part of Burma was different to that of Kansu and unfavorable to the establishment of plants in Britain so this expedition was not that horticulturally successful. The following season in 1920 they were more successful and collected seed of 37 rhododendron species. There was an abundance of plants making a riot of colour on the alpine meadows where 'they slept on soft mattresses of dwarf rhododendrons'. They spent Christmas at Mandalay from where Cox left to return to India and on to England leaving Farrer to a well earned rest in a bungalow in the mountains above Mandalay. Farrer returned to his former site in the Minshan mountains on the Burmese-Chinese border, where it now rained incessantly, to meet up again with his porters and servants. He wrote to Cox mentioning his determination to master his environment and that he had had a bout of fever. Shortly after he suddenly complained of feeling ill with a severe cough. His condition quickly worsened and he refused all food. Four days later he died, officially from diphtheria which was raging through the area. Soaking wet day after day could have been a lethal contribution. His devastated servants buried him high up among the mountains he loved. Many years later one of his local plant collectors told American collector Joseph Rock that he died from alcohol poisoning, but this story may be unsubstantiated gossip. E.H.M.Cox listed the many plants named after Farrer in his 1930 book *The Plant Introductions of Reginald Farrer*.

Frank Kingdon-Ward's (1885-1958) life story could fill several volumes with still some to spare. To condense it does not do him justice. He wrote 25 books about his travels, all popular, and the original editions are still eagerly sought by bibliophiles at some considerable cost today. One biographer described him as 'the doyen of more recent plant hunters. His passion for exploration (both botanical and geographical) knew no bounds and this, coupled with his patience, determination and stamina, his keen and perceptive eye, his modesty and his talent for romantic, but scientifically exact writings made him the envy of his contemporaries and a hero of many who follow after him.' He was named Francis Kingdon Ward born in Manchester. His father was already a respected botanist, mycologist and plant pathologist who became professor of botany at Cambridge University. His mother was Selina Mary Kingdon and Frank later added the hyphen to his surname. He won a scholarship to Cambridge but had to leave to find paid work when his father died leaving his sister Winifred, a teacher, to care for their mother.



Frank Kingdon-Ward

He remembered overhearing a conversation, when quite young, between his father and a colleague who had just returned from Asia saying 'There are places up the Brahmaputra where no white man has ever been'. A friend of the family, knowing of Frank's fascination with the Far East, arranged a teaching job for him at a school in Shanghai which he took and suffered two years of boredom but sent regular remittances back to Winifred.

By chance and through family connections he took extended leave from the school to join a zoological expedition led by an American and funded by the Duke of Bedford to search for new species up the Yangtze into western China. On this trip he discovered a new species of mouse and two new shrews as well as some plant which he sent back to Cambridge. Shanghai Press published his account of the journey *On the Road to Tibet* in 1911.

On returning A.K. Bulley commissioned him to collect hardy plants from Yunnan and Tibet suitable for an English climate. He resigned from his teaching job and set off on his first solo expedition. He brought back 22 new species, seeds and a collection of other plants for Bulley and sent botanical specimens to Kew. He returned briefly to London where he presented lectures illustrated with his photographic slides of the spectacular Himalayas. He returned to China only to be frustrated by the political turmoil in China which made him abandon that project.

He collected again for A.K. Bulley in Szechuan and Yunnan during 1911-1913. A gem of his plant searching was the blue poppy *Meconopsis speciosa* which he found and wrote about in *The Land of the Blue Poppy* published in 1913. Disappointing because it failed to survive in England. *Meconopsis betonicifolia* did survive in its stead being a perennial and became known as the Himalayan Blue Poppy.

In 1914 he was in Burma and had a close shave when a tree crushed his tent in a storm. He then managed to fall off a precipice saving himself by grabbing a tree branch and holding on until he could be hauled back to safety. On his way back he learnt of the outbreak of war and immediately enlisted only to be posted to censor mail. He was later posted to Mesopotamia and promoted to captain where he spent the rest of the war. When it was over he went straight back to Burma returning to England in 1920 for the first time in seven years.

It was in 1922 that he met and proposed to Florinda Norman-Thompson marrying her in April 1923. She was gorgeous, the only daughter of a wealthy landowning couple with estates in Ireland. They had two daughters whom he treasured, but the marriage soon ran into difficulties largely because of money matters, the differences in social backgrounds, and Frank's long absences in China. While being praised for his botanical exploits and his literary skills his personal life behind the scenes became increasingly bitter ending in a difficult divorce.

In the 1930s as well as botanizing he served as a spy for the British India Office. In 1935 he was imprisoned by the Tibetans for crossing the border but was soon released when the British investigated the exact position of the border. From 1926 to 1956 his collecting forays were mostly into Burma and Assam where he was early in WWII and managed to dodge the occupying Japanese because of his intimate knowledge of the country. He instructed allied armed forces in survival techniques and, when the war ended, the Americans sought his help in locating crashed planes and the graves of the lost aircrew. On one of these searches he found the Sirhol lily on Mount Sirhol in Manipur and found it again in 1948 this time with his second wife Jean Macklin described in his book *Pilgrimage for Plants*. It was named *Lilium mackliniae*. Two years later in 1950 they were exploring along the borders of Assam and Tibet when the area was struck by an earthquake measuring 9.6 on the Richter scale. For the previous four weeks Eastern India, West Bengal, Assam and Bihar had been shaken by minor tremors but on the 15th August with the epicenter only about 80 km away the earth erupted with tremendous noise and violence causing widespread devastation and loss of life. It lasted a terrifying five minutes as they lay on the open ground holding hands. Far away at a seismological station in Dorking, Surrey, England the instrument recordings were too blurred to read.

On top of his near misses with injury he suffered recurrences from time to time of malaria which he had contracted early on in his time in China. He admitted to having a great fear of heights which he struggled to manage. He also suffered from high blood pressure and in 1954 a senior doctor at the Tropical Diseases Hospital in London refused to issue a medical certificate to him for the Colonial Office because of that condition.

His wife Jean said 'he was very hard on himself without the slightest conception of what a great explorer he was... If he wanted to go on another expedition with a blood pressure of 250 who was I to stop him? I was fully aware that he might drop down dead and was amazed that he didn't. We got away with it.' Four years later it caught up with him.

Claire Scobie in her 2006 book *Last Seen in Lhasa* recounted this conversation with Jean which gave an insight into his personal life in the 'ten marvellous years' they were married. She described that time as being 'quite unique. I think I was very, very privileged'. They met at a lunch party in 1944 in Bombay where Jean's father was a judge in the Bombay High Court and discovered they shared an intense interest in exploration and natural history. They married three years later in Chelsea, London, which her parents accepted with 'good grace' despite their worries. She was 26, Frank was 62. Five days later they were on their way to north-east India where for ten months the newlyweds lived in a mud hut, and collected and dried and then packed seeds to be sent back to London. They never owned a home or had a garden of their own and in the final years back in London they lived in a bed-sit in a hotel in the Cromwell Road.

Tony Schilling writing about Kingdon-Ward in the American Rhododendron Society Journal in 1991 described him as 'a man of great patience, immense energy, resolution and endurance, and with a sharp and critical eye for detail. This keen power of observation backed by his scientific training put him in a class of his own. He was in every sense of the word, the complete natural scientist with a wide and catholic interest in all aspects of his hunting ground. No one has traveled more widely in the eastern Himalayas, nor written in such detail about it. No-one has collected more selectively and with such individualism, nor summarized his observations so clearly. Not only was he a brilliant field botanist, he also involved himself in the natural distribution of plants and their ecology, as well as the various factors which interrelate with them such as climate, aspect, even zoology and ethnology... On top of all this talent, he was a man of great modesty, and with a quiet yet sharp sense of humor and a concern for animals'.

Kingdon-Ward was the last of the truly great individual plant hunters. The Burmese called him Flower Chief. His hard life and recurring fever had taken its toll. Early in April he suffered a severe stroke, was rushed to hospital where he lapsed into a coma dying two days later in London on 8th April 1958 still planning another expedition, his twenty third.

Roland Edgar Cooper (1890-1967), a plant collector for the Royal Botanic Gardens,



Roland Cooper

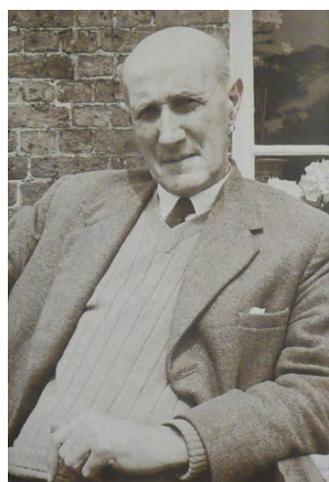
Edinburgh, was born at Kingston-on-Thames, was orphaned aged four and raised by his aunt, Emma Smith, his mother's half sister, wife of William Wright Smith. Smith was appointed Keeper of the Herbarium at the Royal Botanic Garden Calcutta in 1907 and took the 16 year old Cooper with him. In India Cooper studied botany and horticulture and joined his uncle in collecting trips to Sikkim and the borders of Nepal, Bhutan and Tibet.

They returned to Scotland in 1910 when Smith accepted a post at the RBG Edinburgh to describe and classify the mass of material sent by Forrest from Yunnan. It was in Edinburgh that Cooper continued his formal training under Sir Isaac Bayley Balfour planning to emigrate to British Columbia to become a fruit farmer. He had not completed his studies when A.K. Bulley asked him to lead an expedition to Sikkim, an offer encouraged and supported by Smith and Balfour.

With the help of his team of Lepcha collectors he was able to send over 6000 specimens back to Edinburgh, some still thriving there today, before cutting his Indian tour short in 1916 to join the 1st Reserve Ghurkha Rifles on the Indian North West Frontier. He was later attached to the Royal Flying Corps stationed in Alexandria, Egypt where he remained until 1919.

He returned to what is now known as Myanmar as Superintendent of a Botanic Garden in the Burmese Hills in 1921 but returned to Edinburgh with his young family in 1930 to further his children's education. He became Assistant Curator of RBG Edinburgh, later promoted to Curator in 1934 retiring in 1950 with his wife Emily to Essex where he died in 1967 aged 71.

Frank Ludlow (1885-1972) and **George Sherriff** (1898-1967) met in 1929 in Kashgar in



Frank Ludlow



George Sherriff

Chinese Turkestan where Sherriff was British vice-consul and Ludlow, a retired school teacher and school inspector, was a guest of the Consul-General Frederick Williamson. They found that they shared interests in ornithology, travel and plants which became the basis for their joint excursions to the Eastern Himalayas and south-eastern Tibet. They both had a background of military service in the Great War of 1914-18, Sherriff as a professional soldier graduating from the Royal Military Academy at Woolwich in 1918, being gassed in France later in the year and spending the rest of the war in hospital;

and Ludlow, the vice principal of Sind College in Karachi commissioned into the Indian Army Reserve of Officers and spending the war in Mesopotamia. After the war Ludlow returned to Poona as inspector of European schools and in 1923 he was chosen to open a new English speaking school in Gyantse in Tibet pleased to escape the heat of the Indian plains. Despite differences with the Tibetan bureaucracy on running the school he remained on good terms with the Tibetan authorities which enabled entry into the country for his joint expeditions with Sherriff. He retired in 1927 to Srinagar in Kashmir, disappointed he had been unable to do more and disillusioned by uncooperative and obstructive parents of his students and the lack of support from his immediate Tibetan superiors entrenched in their old ways. He recognized back then the growing Chinese influence in Tibet and foresaw the eventual "liberation" of Tibet by the Chinese communists.

Once Sherriff had recovered he was posted to India to serve in a mountain battery in Waziristan in 1919. He enjoyed exploring the mountainous region and happily accepted an appointment as British Vice-Consul in Kashgar. It was here in 1929 that he met Frank Ludlow and agreed to a partnership to explore, study and collect birds and plants in the eastern Himalayas. They set out together in 1933 to Bhutan moving through Tibet and returning to India with the 500 plants they had collected. They planned to explore eastwards through Tibet to the great bend in the gorge of the Tsangpo river which became the purpose of their expeditions over the next few years. Sherriff's private means funded most of their trips with occasional help from the British Museum. The Second World War interrupted their plans, with Sherriff seeing military service in Assam and political and diplomatic assignments in Sikkim.

They swapped roles in 1943 when Ludlow completed two years in charge of the British Mission in Lhasa and was replaced by Sherriff who had meantime married a missionary's daughter Elizabeth Hannah.

The three of them accompanied by Colonel Henry Elliot of the Indian Medical Service set out in 1946 for south-east Tibet and the great gorge of the Tsangpo river but Sherriff could not continue on the trek because of ill health. They joined up again in 1949 returning to Bhutan collecting over 5000 specimens including paeonies, primulas and rhododendrons.

At the same time Frank Ludlow pursued his studies of the birds in the area, collecting nearly 7000 examples which are now in the Natural History Museum. His ornithological studies covering the birds of Bhutan, Sikkim and Tibet were just as significant as his botanical work.

Their sixth and last expedition was in 1949 collecting flora in Bhutan. They returned to Britain in 1950, Ludlow spending the rest of his life working in the British Museum on their own and others' collections. Sherriff returned to his estate in Kirriemuir, Scotland and built a garden with many Himalayan plants. He also brought back his collection of the striking photographs and films he had made in his travels in Tibet.

No résumé of that period in history would be complete without referring to an extraordinary American plant collector, **Joseph Rock**. The following account is taken from an address given by Gwen Bell of the American Rhododendron Society in 1983.



Joseph Rock

Rock was born in Vienna in 1884 and lived in servants' quarters in the winter home of a Count Potocki where his father was a steward. His loving mother died when he was six as did his Hungarian grandmother two weeks later leaving his thirteen old sister to care for the family. His father, stern and grief stricken, religious to an extreme, superstitious and bad tempered was firm in his wish to have his son become a priest. Joseph inwardly rebelled and kept very much to himself yet excelled at school always topping his class and dreaming of faraway lands focusing on China. At age thirteen he struggled to teach himself a Chinese language studying at night after the family had gone to bed. Finishing school in 1902 he refused to join the priesthood and left without his father's blessing.

On impulse he signed on as a cabin steward en route to New York where he found odd jobs including washing dishes. His health deteriorated culminating in contracting tuberculosis and he was advised to move to a warmer, drier climate such as Texas. He travelled supporting himself as a tourist guide and as a seaman which gave him an opportunity to hear and learn foreign languages resulting in a vocabulary of German, French, Greek, Italian, Chinese and Arabic. Determined to improve his English he enrolled in a course at Baylor University in Waco, Texas and learned to speak the language with only the slightest accent. He decided to move to the Tropics and sailed to Honolulu. He had no academic qualifications but was accepted as a teacher of Latin (learnt back in Vienna) and of natural history teaching himself before passing it on to his students. He became absorbed by his botanical studies and by 1911 had published books and monographs on the subject while at the College of Hawaii. He became a skilled collector and preserver of herbarium specimens and learned to use a camera, glass plates and film so much so that he became an outstanding photographer. In 1913 he became an American citizen.

He remained a very private person yet was a very charming and popular dinner guest, but at the same time could be moody with a touchy temper. In a quiet moment he wrote 'In spite of all my friends, I was dreadfully lonely.'

Over the next few years he visited the Philippines, the Chinese coast and Sri Lanka. In 1920 he left the College of Hawaii after a "difference of opinion" and returned to the mainland where he was snapped up by the U.S. Department of Agriculture to collect seed of the chaulmoogra tree (*Hydnocarpus wightianus*) native to Burma, Assam and Thailand as the extracted oil from the seeds was used in the treatment of leprosy until the early 1950s when the more effective antibacterial drugs replaced the oil. Chaulmoogra trees were planted in the many leprosaria in the tropics including the tiny island of Makogai in Fiji where they still grow today among the decaying and overgrown ruins of the old clinic established in 1911.

Rock found another sponsor, the National Geographic Society, and in 1921 he headed for western China setting up a base near Likiang in northern Yunnan, where he employed local tribesmen to help him as collectors and servants. Exposure in his childhood to the lifestyle of the Austrian nobility stayed with him and he travelled equipped with cameras, photographic supplies, guns and ammunition, tents, aneroid barometers, furs, warm clothing, bamboo paper for drying specimens, medicines, canned foods and collapsible bathtubs. Edgar Snow, journalist and author and authority on communist China, travelled with him twice and wrote: 'During the march, his tribal retainers divided into a vanguard and a rearguard. The advance party, led by a cook, an assistant cook, and a butler would spot a place with a good view, unfold table and chairs on a leopard skin rug and lay out clean linen cloth, silver and napkins. By the time we arrived our meal would be almost ready. At night, it was several courses ending with tea and liqueurs.'

During that summer Forrest, Kingdon-Ward and Rock met in the field, each seeming wary of the other and jealous of the territory. Rock continued through the Mekong valley and along the Salween river writing 'We passed through rhododendrons for days to the source of the Mekong and Yellow Rivers.' From that trip, he sent thousands of herbarium specimens and seeds, some never before introduced, and the skins of 1600 birds and 60 mammals to the Museum of Natural History at the Smithsonian.

He was now without a sponsor and it was Sargent at the Arnold Arboretum, with Wilson out of action with a broken leg, who engaged Rock to return to China to explore further north of Yunnan to find hardier ornamentals able to withstand Massachusetts weather. Rock had to make his own maps of the area and calculate distances and altitudes as none of this information existed. The area Rock had to travel through was becoming more dangerous with bandits ambushing caravans, robbing travellers and attacking villages. Rock's entourage was surprised and hastily retreated but the bandits had second thoughts of attacking a group so obviously well prepared and armed and turned to attack a smaller party.

The locals were impoverished and had resorted to growing opium poppies. He reached Choni in Kansu province only to find conflict between the Moslems and the Tibetans. He confronted the notorious leader of the Moslem faction and was surprised to be given an escort for a safe passage to cross the Yellow River. There he found valleys covered in spruce and juniper and carpeted with primulas and meconopsis. Further on the countryside became bleaker with even the floors of the valleys rising to more than 4500m. Returning to Choni he found there had been a crop failure, rising anti-Christian sentiment against the missionaries and felt it was time to leave. Sargent advised him to leave but Sargent then died leaving Wilson to take over. Wilson wrote to Rock demanding he leave the field to reduce the Arboretum's expenditure.

Rock was unaware of the serious nature of the financial crisis at home and sold some of his Chinese and Tibetan artifacts to help finance another journey only to witness the invasion of China by the Japanese in 1937. In Calcutta on his way back he accidentally met some American armed forces personnel and he was soon sent by a top priority plane to

Washington to advise regarding the American airlift from India to Chungking over the mountain ranges he had explored and mapped.

His belongings, his manuscripts, translations, and his years of work were lost when a Japanese submarine torpedoed the ship carrying them. Unfortunately only some of it had been photostated and kept separate.

He asked the American Rhododendron Society to finance a final trip of two months in which he collected seed from 165 varieties of rhododendrons which E.H.M.Cox described as cleaner, had fewer rogues and better germination than from any other collector. Chinese villagers told Rock he was no longer welcome, the United States was the enemy of the Chinese people, and his retainers were slaves of a foreign devil. He left via India saying that he wanted to return to die among the beautiful mountains rather than alone in some hospital bed. He sold his library to the Far East and Russian Institute at the University of Washington in Seattle for \$25,000 and was appointed an Honorary Research Assistant.

From 1945 to 1950 he was a Fellow at the Harvard Yen-ching Institute where he published his studies of the indigenous Naxi people of Yunnan Province in western China, their history and their unique pictographic language. He returned to Hawaii where he died in 1962 from heart failure.

Each collector had his own method of working. Kingdon-Ward and Farrer, selecting the best forms, collected on their own without a team of native collectors. Forrest and Wilson and much later the American Joseph Rock, also particular with his selections, employed and trained groups of locals who covered far more ground than the single handled collectors could accomplish on their own. Even when Forrest, who engaged as many as twenty locals, was absent from the field his team continued collecting plants and seeds which accounts for the vast amount of material he sent home to Scotland.

Plant collecting was a hard and often dangerous occupation and was poorly paid. A consolation prize was having many new species named after the finder. Those who had the means, like Sherriff and Farrer, paid for themselves. Others who did it for a living had a hard time of it making ends meet. Forrest was fortunate in that he was given a bonus for each new species he sent back.

The Great Wars of 1914-18 and 1939-45 interrupted the intense activity of the plant explorers whose forays into foreign lands became extremely difficult or impossible after 1945. The resulting political and social changes and escalating costs were all barriers to the sort of activities carried out in the intervening years. The scene today is very different. The early plant collectors spent a year or more in the field dodging disease, insects, wars and rebellions. Lengthy excursions are now a thing of the past. They have become expensive to mount and support in the field. Political barriers have closed off many areas and violence is still a threat. Governments today object to losing their flora to outsiders and have passed legislation to prevent removal of indigenous flora (and fauna) even though they may do little or nothing to protect or conserve it themselves. As well, international agreements such as CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora), the Nagoya Protocol, and the GSPC (Global Strategy for Plant Conservation) restrict or prohibit access.

Gone also is the establishment and costly maintenance of the large landscape gardens of yesteryear. Some were scaled back, others fell by the wayside with others surviving with the support of the National Trusts particularly in Britain.

How many of us today, when looking at rhododendrons or the hundreds or even thousands of other species which came from China and so changed our parks and gardens, spare a thought as to their origins and the trials and tribulations of the plant collectors who introduced them into cultivation. Without them our world today would be a very different place.

Acknowledgements

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J.Godfrey - March 2017